

Routes to tour in Germany

The Rheingold Route

German roads will get you there — to the Rhine, say, where it flows deep in the valley and is at its most beautiful. Castles perched on top of what, at times, are steep cliffs are a reminder that even in the Middle Ages the Rhine was of great importance as a waterway. To this day barges chug up and down the river with their cargoes. For those who are in more of a hurry the going is faster on the autobahn that runs alongside the river. But from Koblenz to

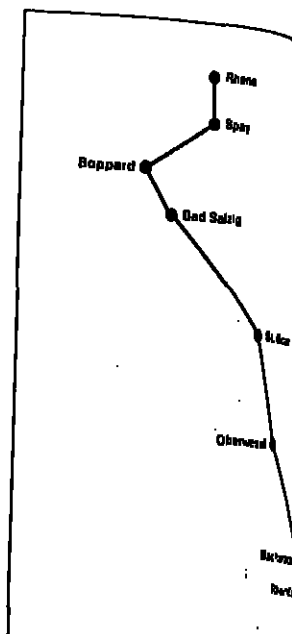
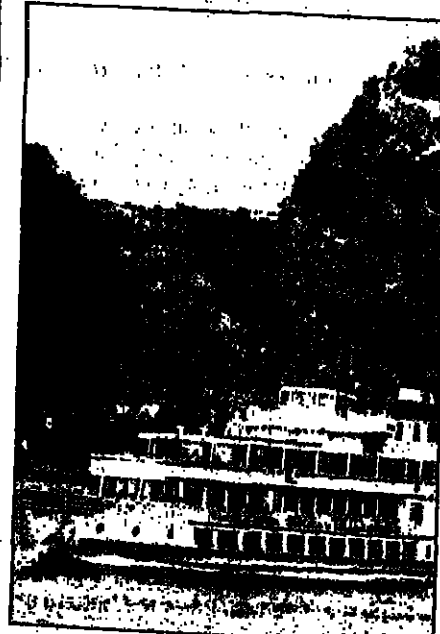
Bingen you must take the Rheingold Route along the left bank and see twice as much of the landscape. Take the chairlift in Boppard and enjoy an even better view. Stay the night at Rheinfels Castle in St Goar with its view of the Loreley Rock on the other side. And stroll round the romantic wine village of Bacharach.

Visit Germany and let the Rheingold Route be your guide.



- 1 Bacharach
- 2 Oberwesel
- 3 The Loreley Rock
- 4 Boppard
- 5 Stolzenfels Castle

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Kohl in Tokyo: security and trade top the agenda

Chancellor Helmut Kohl held wide-ranging talks in Asian capitals during a tour of the region. Here, correspondents report from Tokyo, New Delhi and Jakarta.

Tokyo placed a high value on German science, medicine and philosophy, art and music and, last but not least, the German military system.

The two countries, World War II allies, have each made great strides in reconstruction since their defeat in 1945.

They now rank alongside the United States as the largest industrialised countries in the free world and leading trading nations.

They are both "locomotives" of world trade and both feel, after bitter past experience, specially committed to basic democratic values.

They share a special responsibility for achieving the international economic objectives outlined at the Williamsburg summit.

The latest Japanese decisions to boost the economy mainly by stepping up domestic demand and to further open the home market to imports were welcomed by Bonn as a step in the right direction.

Both countries depend on foreign trade and stand up for the principle of free world trade and against the temptation to resort to protectionism.

Bonn's attitude is appreciated by Tokyo, but the Bonn government needs further cooperation by Japan, especially in eliminating bureaucratic barriers, if it is to oppose demands in the European Community for protective tariffs against imports from Japan.

Experience in the European Community has shown how great the advantages of trade between advanced industrial states can be.

So everyone stands to benefit from an increase in trade between Europe and Japan. Germany and Japan can likewise only gain from a substantial increase in cooperation in science, research and technology. Chancellor Kohl's visit was not just devoted to trade matters. Trade, in any case, is mainly the responsibility of

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Sharing a joke... Japanese Prime Minister Yasuhiro Nakasone (right) and Chancellor Kohl in Tokyo. (Photo: dpa)

New Delhi: a good time to get together again

A glance at the newspapers in New Delhi and talks with people in the Indian capital showed that Chancellor Kohl's visit was viewed with satisfaction.

In many cases it was seen as a fresh start in Indo-German relations — even though it was only a stopover and other countries, such as Britain or France, maintain much closer ties at this level.

It was the first visit to India by a Bonn Chancellor since Kurt Georg Kiesinger paid the country a visit in 1967.

The initial response in the Indian Press was overwhelmingly positive, with the emphasis mainly being placed on economic ties between the two countries.

The current official German view is that ties are unproblematic, although they are no longer as dynamic as they

were in the late 1950s when Bonn embarked on bilateral aid.

Aid continues to this day, but it began with such spectacular projects as the Rourkela steelworks.

Even so, trade has increased steadily. German imports from India, mainly clothing and textiles, last year totalled DM1.3bn, or nearly twice the 1975 figure. German exports to India, mainly steel and machinery, last year totalled DM2.1bn and were more than double the figure for 1975.

The Federal Republic of Germany is now India's fifth-largest customer after the Soviet Union, the United States, Japan and Britain.

It is also the fifth-largest exporter to India: after the United States, Iran, the Soviet Union and Japan.

German direct investment has also been on the increase again of late, although at roughly DM210m in the first six months of this year it was not much higher than 10 years ago, when the figure was DM181m.

In the number of joint ventures by licence-agreement or joint company the Federal Republic ranks third, with 1,292 projects sanctioned.

The lead is held by Britain, with 1,641 projects, followed by the United States, with 1,408.

These figures are noteworthy, if not very spectacular. They fail to paper over the fact that for a wide range of reasons German businessmen seem to have forgotten India a little in recent years.

Access to this gigantic market has never been easy, partly because it is so complex and partly because Indian economic policy is not always clear and to this day remains restrictive, but mainly because of red tape.

There has been no lack of disap-

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Jakarta: appeal to Third World

Chancellor Helmut Kohl has called on the Third World countries to bring about balanced and controlled disarmament and try and influence the arms race.

Kohl was speaking in Jakarta during his visit to the Indonesian capital.

The Chancellor emphasised NATO's intention to deploy new medium-range missiles as a means of restoring balance and preserving peace in the region.

Indonesian President Suharto stressed that his country must show serious intent to achieve a just and balanced solution on the basis of all people being treated in principle.

He thanked the Federal Republic of Germany for having so staunchly supported cooperation between Asean (Association of South-East Asian Nations) and the European Community.

During the Chancellor's visit, he felt sure, he played its part in consolidating the bond of friendship between their peoples.

What the Germans accomplished in reconstruction," he said, "is an incentive for the Third World."

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Tribune will appear on 27 November.



Indian Prime Minister Indira Gandhi and Chancellor Kohl in New Delhi. (Photo: AP)

WORLD AFFAIRS

Bonn and East Berlin hold on despite Geneva

Süddeutsche Zeitung

The Bonn government is treading a tricky path in its *Deutschlandpolitik*. It runs the risk of being accused by GDR propagandists of contributing toward a deterioration in relations.

East Berlin, says Bonn is not merely approving the deployment of new US missiles but also of seeking to justify it.

At the same time Bonn is sounding out with some anxiety whether as a result the intra-German ties of the CDU/CSU-FDP government really stand to take a serious knock.

The Federal government cannot even be blamed for these mixed feelings. They are part and parcel of East-West tension.

To this extent the two German states may not share a direct identity of interests, but they are in a similar conflict of interests.

The GDR is probably as unenthusiastic about the probably inevitable Soviet decision to go ahead officially with the deployment of fresh Russian missiles in East Germany as Bonn is of missile modernisation.

As the deadline for deployment draws near even Christian Democrats who keep strictly to the party line are wondering on the quiet whether the limited strategic benefit of Pershing 2 and Cruise missiles outweighs the considerable political and psychological damage missile modernisation will cause.

Herr Honecker, the GDR leader, must see as more than a mere blemish the fact that the new Soviet missiles will be accompanied by even more Russian troops to service them.

The two German states are suffering from the consequences of the great powers' nuclear policies. But they can-

not prevent them, merely ease their effect.

This is the purpose of a plan drawn up by the Bonn Chancellor's Office to enable the Federal government to keep up business as usual with the GDR beyond 22 November, the day on which the first new US missiles are due to arrive.

Assuming it is right to expect the Geneva missile talks delegations to quit the conference table but, figuratively speaking, to leave the table in place so they can return to it after a suitable break, then only this break would need to be bridged over.

With this aim in view intra-German talks, currently in progress at various levels, involving various parties and dealing with various issues, are to be continued.

The list of intra-German talks at over a dozen levels extends until March next year.

The agreement on purification of the water in a border river, the cost of which is to be shared by Bonn, Bavaria and the GDR, is the first instance of a joint environmental protection project.

It could be followed by others for the rivers Werra and Elbe.

Goodwill gesture

Following a gesture of good will by East Berlin, the intra-German cultural talks have now gone into their second round.

They will probably be as protracted as the talks on a legal assistance agreement.

It may sound paradoxical, but projects that prove difficult and complex at least ensure a backlog of subject matter on which the two German states can keep on talking.

Spectacular events, fresh loans by the West or travel easements by the East, are most unlikely in the near future.

But with a little luck, skill and patience intra-German ties could be made to outlast the winter by dint of sheer routine.

Klaus Dreher
(Süddeutsche Zeitung, 4 November 1983)

India's huge potential

Continued from page 1

pointments from the German point of view. For the Indians too, a number of great expectations have not been fulfilled.

In the 1970s other export markets and investment locations in Latin America and Asia seemed more promising and potentially more profitable than India to German businessmen.

A number of these alternatives, such as Iran, have since proved a let-down.

Well-known German companies such as BASF, Bayer, Bosch, Daimler-Benz, Demag, Gutehoffnungshütte, Hoechst, Krupp, Lurgi, Mannesmann and Siemens are represented in India and continue to show interest.

But for many German companies India seems to have stayed white on the map, or so the Indo-German Chamber of Commerce and trade experts at the German embassy in New Delhi feel.

The world has changed since the recession. German manufacturers can no longer sell just anything they see fit to manufacture; they have to get out there and collar their customers.

Markets that used to be promising are now marking time because of the debt crisis. China used to be seen as the future foremost economic power in Asia. India now seems to be getting another look-in.

Planning staff at the Bonn Foreign Office recently noted in a survey that India could hold its own in comparison with China.

It represents much of a sub-continent and a population of 700 million, which makes it the second-largest nation in the world, as everyone knows.

It is also the ninth-largest industrial power, which comes as a surprise to most people.

India, the planners said, was relatively independent of international economic trends and very much comparable with China in technology.

It manufactured its own computers and built nuclear power stations, satellites and rockets.

At the same time a number of obstacles to external trade have been lowered

in India, with restrictive measures having been eased slightly.

"The Indians," says the Indo-German Chamber of Commerce in New Delhi, Hermann, "have grown more progressive in the line of strict import controls, especially over the past decade. Industrial base has been widened."

An arguably even more point to be made is that India has now gained a certain respect among the rich in India. It is no longer keen to buy nothing imported goods.

So there are many signs that the Indian market, and with it India's economic ties, must be seen in a light from a few years ago.

A characteristic feature is the interest shown by the Japanese, now extremely successful in India, as shown by the development of Indian-made cars.

Suzuki Motor Co. has signed a manufacturing agreement with Maruti to ensure an election victory, including a share in the Indian market.

Volkswagen, having misjudged the market in the past, is still out there trying to get its foot in the door of the Indian market.

Japanese commitments in India have extended to the car and truck market too, which is likewise under Japanese influence.

France, another competitor, is active in India, especially in the trade (Mirage jet fighters), which lead to preference for French in other sectors.

Competition for the few markets that have yet to be opened is fierce.

Herr Kohl's visit certainly came right time to step up relations between India and the Federal Republic.

In economic terms India's position as a partner at next year's summit may well prove more important.

For India this special show, demonstrating the capacity and diversity of the Indian economy, will be the largest projects of the kind ever undertaken.

For German industry there are to be fine opportunities in India. They are put to good use. Germany is a slogan that has lost the glamour it once had, but shines.

This is shown by export and import successes achieved by many German companies.

Let that not be taken as mere footling in India, but surely the true of the Japanese and Chinese.

J. Jürgen
(Frankfurter Allgemeine Zeitung, 5 November 1983)

Kohl's talks in Tokyo

commitments and is willing to supply the latest in military technology to the United States.

It is also preparing to defend by itself to a distance of 1,000 nautical miles the maritime routes to Japan that are so important for it as a trading nation.

The Japanese take a calm view of 'peace rallies' in Germany. In the past they have had much more serious clashes in their own country.

They are well aware of the arguments. The Socialists, Japan's leading opposition party, advocate a policy of unarmed neutrality.

In a recent Japanese parliamentary debate on security policy Premier Nakasone made it clear that nuclear weapons will neither disappear nor be reduced in number by making speeches against them, as was done by the Socialists and Communists.

Soviet SS-20 missiles are a threat not only to Western Europe. They are also aimed at targets in China and Japan,

and steadily increasing numbers are being deployed in the Soviet Far East.

The Japanese took a dim view of Soviet offers to withdraw to the east some of the missiles aimed at targets in Europe. The West is not going to take the Kremlin up on such offers.

At the Williamsburg summit, where Mr Nakasone endorsed the Nato dual-track decision, the joint declaration noted that: "The security of our countries is indivisible and must be dealt with on a global basis."

Chancellor Kohl in Tokyo expressed full understanding of Japanese security interests and of Tokyo's call for Soviet missiles to be scrapped and not transferred to Asia.

In Japan people are as well aware as they are in America and in Western Europe that we are all in the same boat.

Tokyo endorsed the Western negotiating position partly because Japan feels that President Reagan must enjoy the united backing of his allies in negotiations with Moscow.

Only then can there be hopes of a settlement being negotiated in Geneva.

Siegfried Thielbeer
(Frankfurter Allgemeine Zeitung, 11 November 1983)

HOME AFFAIRS

The shibboleth that shows jumpiness of the CDU

allegedly paid by the Flick group of companies.

But there is a widespread fear that Count Lambsdorff could become involved directly in a court case. This would make his resignation inevitable.

Speculation about his being replaced by Strauss has been rejected by the Chancellor.

Kohl seems to want to leave it to the FDP to name Lambsdorff's successor.

But there are other, even weightier, problems involving economic, social and fiscal policies — the issues on which the government received its mandate.

The CDU defeat in Hesse is blamed primarily on the fact that the public is feeling the effects of the belt-tightening imposed by the government in a bid to put the budget on an even keel and bring about an economic upturn.

This includes above all the cutbacks in social benefits — which are made more painful by the fact that there is no evidence of any beneficial effects.

The public disenchantment is aggravated by the factionalism within the CDU.

Kohl is thoroughly familiar with the difficulty of keeping opposing wings together.

He has been unable to stop the latest tug-of-war between the left wing social affairs committees and the right wing business lobby.

Kohl censured by Strauss over Grenada

CDU leader Franz Josef Strauss has sharply criticised the Bonn government for its attitude towards the US occupation of Grenada.

He has censured Chancellor Helmut Kohl for not having consulted him on the Grenada issue and has urged more solidarity with the USA.

Strauss's statements boil down to the demand that Germany publicly support American actions no matter what.

He indirectly touches on the scope of German foreign policy and its independence of the USA within Nato.

The desire for independence has wide support. The SPD in particular is making a point of not giving the impression of being a US outpost.

Strauss knows that the issue cannot be handled in a black-and-white manner.

In the early 1960s, when he played the card against the Nato support, his stance was exactly reversed.

When he adopted the French line of independence from the USA

under Ludwig Erhard and Gerhard Schröder.

But today — as then — Strauss is interested in fomenting internal disputes within the CDU camp than in a foreign policy line. He hopes that these disputes will further his own aims.

Then it was Ludwig Erhard who had censored him, today it is Helmut Kohl. Strauss has not changed. He adapts his positions to the needs of the moment.

Achim Melchers
(Frankfurter Allgemeine Zeitung, 31 October 1983)

SPD is all set to reject deployment

stance his party could adopt; a "no" to deployment.

A master of mental acrobatics, he has undertaken to prove that the rejection of the two-track decision towards the end of this year is the direct consequence of the opposite made four years earlier.

But for the sake of peace within the party he is prepared to formulate the rejection in a way that will not totally isolate Schmidt and his followers.

Even so, Bahr will stress at the Cologne meeting that, in his view, the Soviets have gone out of their way to offer compromise solutions.

Hans Apel is somewhere in the middle: between Bahr and Schmidt. Like Schmidt, he is concerned over his personal credibility. But he does not want to become the conservatives' advocate.

As far back as last summer, Apel said that those frontliners who approve of the two-track decision would "commit political suicide."

He has therefore tried to build a second front: a conditional "no" to deployment. He calls it a "nuanced no."

What this boils down to is a clear yes to Nato and the Bundeswehr and no final rejection of the deployment.

This course of action is meant to prevent the SPD from becoming totally isolated should Moscow and Washington reach an agreement in Geneva after all — an agreement calling for the deployment of only a certain number of missiles in Germany.

Rudolf Grosskopf
(Deutsches Allgemeines Sonntagsblatt, 8 November 1983)

There has, however, been growing criticism within the conservative camp about the manner of governing.

The Chancellor is being criticised for holding too few Cabinet meetings and for his generally imperturbable manner. This has earned him the accusation of wanting to "ride to power in a sleeping car."

But he persists with his many discreet individual discussions rather than Cabinet meetings, playing the game with the cards close to his chest.

CDU parliamentary party leader Alfred Dregger vented his disappointment over the lost election in Hesse by criticising the poor manner in which the government was selling its policy.

Kohl rejected the criticism on behalf of both his party headquarters and his Press and Information Office.

He suggested to Dregger that he should improve his parliamentary group's PR work.

The transfer of the experienced press liaison man Eduard Ackermann to the Chancellery has made itself felt.

Anybody talking with the Chancellor these days can feel his unbroken pleasure in bearing responsibility.

He in no way suffers from his burden. In fact, the more hectic things get around him, the thicker his skin becomes.

He likes to stress that he has always been better at long-distance running than at sprinting.

Commenting on the complaints around him, he says: "Better foolish talk and the right vote than the other way around."

Helmut Klein
(Der Tagesspiegel, 23 October 1983)

Together with Bahr and Horst Ehmke, Apel was chosen for the tricky task of drafting the relevant motion in Cologne.

Much will depend on the wording of the motion. The idea is that it should meet the grassroots wish for a clear rejection of the deployment while helping Schmidt and his followers save face.

The three authors of the motion were picked because they represent the three main factions in the party.

But only a week or so ago, Apel seemed to have become convinced that the general mood in the party would not permit him to uphold his stance.

He has meanwhile turned down the assignment on the grounds that he was unable to do what was expected of him. His place has been taken by former Family Affairs Minister Antje Huber.

The change will not interfere with the timetable because the motion is to be drafted after the Geneva talks are expected to have ended.

This is another departure from the norm for a party that has always prepared such motions well ahead of time, evaluating and examining them before putting them to the vote.

In the meantime, it is becoming increasingly difficult to formulate the "no" as diplomatically as possible and yet clearly enough to suit grassroots views.

The fronts between the factions have been stiffened still further by America's action in Grenada.

Whenever the missile issue is raised, the Social Democrats now point to Grenada.

The party now sees its worst fears about the Washington menace confirmed.

News of the sensational EEC breakthrough was announced on the radio as I was driving back to Brussels from Luxembourg.

The 875th meeting of EEC Agriculture Ministers had ended early that morning with decisions that finally opened the door to membership talks with Spain and Portugal.

It could not be long before Spain and Portugal were full members, the programme presenter jubilantly claimed in Cologne. Not a word of it was true.

Yet for six years negotiations on southern enlargement of the European Community have been so protracted that every knot unraveled seems like a gigantic step forward toward European integration.

Politicians have never been reticent about proclaiming good intentions. But fine words have often concealed conditions that couldn't be met.

Bonn Foreign Minister Hans-Dietrich Genscher is arguably the most important advocate of Spanish membership of the Common Market.

"While he was in the chair the Federal Republic did a great deal to speed up the talks," Spanish Foreign Minister Fernando Morán said.

But that is to ignore the role of Bonn Finance Minister Gerhard Stoltenberg, who continues staunchly to oppose any idea of an increase in VAT remittances to Brussels.

And unless the EEC has more money in the kitty, especially from Germany, there will be nothing it can do for Spain or Portugal.

There is constant reiteration of the general political target of strengthening the two young Iberian democracies by allowing Spain and Portugal to join the EEC.

But it is seldom followed by any mention of the financial framework within which accession is to take place.

The cost of accession is not an insuperable obstacle for the Community, and given the importance of enlargement it cannot be considered too high either.

But: "The size of the budget in its present form would increase by 15 to 20 per cent. Net transfers to the two new member-countries, based on an imaginary budget of the 12 for 1981, would amount to between 850 and 1,400 million ecus, or between four and six per cent of the enlarged Community's budget."

This quote is taken from the European Commission's November 1982 paper on enlargement, and there can be no challenging the figures.

Many people who are keen on Spain and Portugal joining the EEC are as unaware of these figures as they are of

■ THE EEC

Spain and Portugal begin to lose interest

the final document drawn up by EEC leaders at the July 1983 Stuttgart summit.

"Membership talks with Spain and Portugal," it stated, "are being conducted with a view to arriving at a conclusion in time for the terms to be ratified together with the results of negotiations on future Community finances."

This may sound fine, but in reality it amounts to a brush-off. As long as Community finances remain controversial the pathway to EEC enlargement will be blocked.

The Athens summit in December will make no difference to the opposite viewpoints of the rich and poor in the EEC. A "no" to Spain is thus a foregone conclusion.

Against this background the latest round of talks between EEC Agriculture Ministers must be seen in a different light.

The 10 Ministers unanimously agreed to adjust to the existing state of affairs within the Community on Mediterranean products.

What that meant was that the EEC farm lobby was prepared yet again to spend money hand over fist even though the Community will no longer be able to meet current expenses from funds in hand by the end of the year.

The Agriculture Ministers also plan to protect apricots, aubergines and tomatoes from competition from non-EEC countries.

This seems sure to have the same disastrous consequences for consumers as it had had in respect of milk, meat, grain and other products.

Mediterranean producers France, Italy and Greece were allowed to help themselves yet again in respect of fruit, vegetables and olive oil, but there will be no further helpings.

Agreement on maintenance of the existing state of affairs has provided Spain with its first-ever opportunity of costing the benefits and drawbacks of EEC membership.

The Community may have opened the door but it will now cost more to go through it.

State secretary Hans Jürgen Rohrer of the Bonn Agriculture Ministry said in Luxembourg that there could no longer any objections to Spain joining the EEC.

At the European Commission it was argued at the same time that the latest agricultural decisions might make negotiations with the two would-be new members more difficult.

No-one had worked out before the Agriculture Ministers reached their unanimous decision just how much it was all going to cost.

So it would certainly be premature to say that agricultural problems had been solved. The opposite is true.

A provisional review of the progress of talks shows that agreement has been reached on regional policy, transport, the movement of capital, legal adjustment, freedom to set up in business and the service trades and economic affairs and finance.

But agreement has yet to be reached with Spain and Portugal on, say, fisheries.

That may seem a minor consideration in a community of industrialised countries, but some idea of the pitfalls it could entail can be gained from the failure of countless sessions of EEC Councils of Ministers to reach agreement on herring catches.

Spain has one of the world's largest fishing fleets. Its catches amount to roughly a third of the total value of catches landed by EEC fleets.

In a 12-member EEC about one fisherman in four would be a Spaniard. How is he to make ends meet if the rich industrialised member-countries compete for his fishing grounds?

Serious obstacles remain to be surmounted even where cash or access to fishing grounds are not at stake.

How, in a 12-member EEC, are decisions to be reached and political bodies to be kept working? Experience with Greece counsels on the side of caution.

Athens has very much upset the other nine by going against the grain and on its own to a remarkable extent by EEC standards and by virtue of the striking incompetence of its representatives.

"Cumbersome nature of the decision-making machinery" is a Brussels euphemism for the fact that at sessions of the Council of Ministers national interest is increasingly being taken as an excuse for using the veto in a manner not envisaged by the Treaty of Rome.

Danish objections nearly scuttled the entire EEC fisheries policy, while Bri-

tain almost vetoed the EEC's Portugal, for instance, to be able to impose its views on the Common Market where they are shared by the other 11?

Proposals for solutions are being discussed. The Commission suggested to the Council of Ministers that disputes should be referred to a decision. The Council is to agree to this proposal.

Minority views can be deliberated down by qualified majorities or even a "second key", when it comes to unanimous decisions.

But that would amount to the terms of the EEC, the British and German governments, being forced by the CSU leader, has thought out loud accept and bankroll an increasing pendulum.

Bonn is obviously not prepared to let that happen, while other countries have equally good reasons for not accepting that run counter to their interests.

Everyone would like to think that the third parties are in a position to right while maintaining their own interests. The Community could have a political context of whether, in the join the EEC four years before any say in the use of US nuclear weapons or even prevent their use.

As a small country its problems are within the EEC's capacity to moderate, but they are now seen in the much more problematic text of Spain's.

"Portugal poses no special difficulty for the terms of the North Atlantic Community producers," it was said in connection with a resolution in the European Parliament.

"Its production potential is limited, while its production structure is extremely outmoded. It needs specific support measures within the Community."

These measures have in fact been under way.

Enlargement of the European Community to include Spain and Portugal would create problems, especially in the nuclear sector, which is unrealistic.

On the day after the Agriculture Ministers met, a bullet-proof Mercedes drew up outside the main entrance of the European Commission in Brussels.

It belonged to King Hassan II of Morocco for whose country the EEC Community is both the largest customer and the largest supplier.

He is bound to have to worry about trade with the EEC when Spain and Portugal join the Common Market and enjoy EEC preferences on the right of the barriers to trade in Mediterranean produce.

Algerian representatives paid the Moroccan Commission a visit at the time as the Moroccan monarch had called just beforehand.

All these countries are rightly wary of the EEC. The uncertain nature of no-one could expect Spain to join the EEC and opportunities for non-EEC countries to export Mediterranean products to the Common Market have proved too.

Spain's Socialist Premier Felipe González is trying to speed up the pace of linking it with other factors. He said Spain would only stay in the negotiations with the EEC as long as it was in the Community.

He was going to write to the Commission for a clear statement of intentions. It is running out, with Spanish and Portuguese interest in joining declining.

Less than half the Spaniards and Portuguese in four is still in favour of accession.

Rudolf Weyand

(Die Zeit, 28 October 1983)

PERSPECTIVE

Missile debate widens to include question of a veto over use

Frankfurter Allgemeine

and, by implication, which areas are not to be considered as targets.

Then there is the question of the procedure by which the go-ahead is to be given for their use.

No-one is disputing that the US President is the only man who can give the order to fire, but that is no guide to whether he is required to consult his allies beforehand.

Assuming he is, can he overrule them? Are all Nato countries to have an equal say, and is there to be a right of veto?

The decision to use nuclear weapons is, after all, one that can have consequences for a Nato country up to and including its total destruction.

Four follow-up documents to MC 14/3 were drafted during the 1960s. They outlined regulations for tactical first use, for the use of nuclear mines, for the use of long-range strategic weapons and for the consultations that were to precede their use.

What matters for the Federal Republic is not only that Nato has made it clear in these documents that an aggressor must realise that his own territory is not necessarily safe from nuclear bombardment from the moment he occupies Nato territory.

The consultation procedures, which are laid down precisely and in detail, are equally important.

The regulations distinguish, for instance, between first use and response to a first strike by the Soviet Union.

Where first use by the West is concerned, the US President is under obligation to consult his allies. In the event of a Soviet attack he is merely strongly advised to consult them.

This distinction is in keeping with the imponderables of a nuclear attack on the West.

But not only the formal consultation

Unrealistic

applies equally to the United States and to Luxembourg, but it creates problems, especially in the nuclear sector, which is unrealistic.

The flexible response strategy, as laid in Nato document MC 14/3, is based on a compromise between legal equality and factual inequality of the pact's members.

The document is a general outline of defence and self-assertion strategy and that in the event of an attack on the territory the pact would only use weapons to the extent required to restore the integrity of pact territory.

MC 14/3 also says that Nato reserves the right to use such weapons it might have available in order to attain this objective.

potential aggressor is thus left uncertain whether Nato would limit itself to conventional weapons or use tactical or strategic nuclear weapons.

Nothing is predictable. The uncertain nature of the risk is what is wanted; it is intended to have a deterrent effect.

Deterrence presupposes both the ability and the determination to respond effectively to an attack, and both depend on the number of preparations.

They include not only the maintenance of armed forces manpower and equipment but also agreement between sovereign member-states on how to respond in a given situation.

The general provisions outlined in MC 14/3 are not enough. Specific arrangements must be made in respect of which the use of nuclear weapons might be considered by way of defence.

Further questions include what targets and territory they might be aimed at

procedure within the West has been clarified; before reaching a decision the US President must also consult the North Atlantic Council.

Special importance is to be attached to the views of a country or countries that are likely to be mainly affected by a nuclear decision.

Countries mainly affected are defined as those from whose territory nuclear weapons are to be used and where warheads and delivery systems are stationed.

This being so, the Federal Republic could lay claim to special importance. In the event there would be a simultaneous conference involving the North Atlantic Council in Brussels, the US President in Washington and Nato governments in their respective capitals, especially the German Chancellor in Bonn.

Care has been taken to ensure that the necessary connections are available and will work even in an emergency.

The installations by which consultation procedures are to be operated are by no means all that has long been at the ready.

Every year classified Nato manoeuvres, such as Wintex, are held, to give governments and heads of government practice.

This is to ensure that those who will have to take decisions know what can happen and what specific situations and constraints they might face, what options they could be left with and what considerations they would need to bear in mind.

Alliance interests and national interests need taking into account, ranging from the use of nuclear weapons to target planning.

There is, for instance, a difference between targets being limited to parts of one's own territory that are occupied by the enemy or including his own territory.

If they are to include his territory, are they merely to extend to the glacis pro-

vided by his allies or to include his own heartland too?

Nato's nuclear planning group was specially set up to enable America's allies to have a say in matters of vital interest to them.

So it is up to the Bonn government, and especially the Chancellor, to deal with the subject so intensively that it (or he) can express an authoritative opinion.

He must leave no doubt that his "no" on the use of nuclear weapons in a given situation would amount to a formal veto and that to ignore his decision would be to call the pact into question.

A more formally guaranteed veto right in respect of the use of nuclear weapons on or from Federal Republic territory might be feasible.

Whether it would be advisable is another matter. First, the Americans' right of disposal over their own nuclear weapons would be restricted. Second, any such arrangement would seriously limit Nato leeway and affect the credibility of its deterrent.

If a German Chancellor were to have a right of veto on the use of nuclear weapons it would be hard to imagine him not using it in view of the pressure he would be under.

That would perceptibly reduce the risk even in peacetime that any potential aggressor would be running.

The yardstick of Nato's behaviour must be to make the risk incalculable for any aggressor, and hence unacceptably high.

That presupposes a minimum of mutual trust and desire for self-assertion. If they are lacking, especially trust in one's allies on crucial issues, the only alternative is to forgo self-defence or establish an independent nuclear deterrent.

France did the latter. For the Federal Republic it is as out of the question for many reasons as is the option of dispensing with self-defence entirely.

So we will continue to have no choice but to rely on Nato and the combination of well-advised confidence in our allies and exertion of active influence on pact policies.

Karl Feldmeyer

(Frankfurter Allgemeine Zeitung für Deutschland, 17 October 1983)

Kohl in Djakarta

Continued from page 1
centive for our country to work hard at its own development."

Herr Kohl, who flew to Djakarta from Tokyo, paid the Indonesian capital the first visit ever made by a Bonn head of government.

On large billboards' gigantic portraits of Herr and Frau Kohl and President and Mrs Suharto smiled down at the crowds.

The Indonesian Press, in articles of welcome, had stressed the longstanding tradition of cordial ties between the two countries.

But these words of welcome were interspersed with criticism of what so far has been a very lopsided trade balance in the Federal Republic's favour.

The Chancellor spent a mere 26 hours in Indonesia, population 150 million. He laid a wreath at the memorial to those who died in paving the way to independence from the Dutch and colonial rule in 1945.

He then conferred with the Indonesian leader for over two hours on world affairs. At Indonesia's request special attention was paid to the New International Economic Order and to reactivation of the North-South dialogue.

dpa

Heinz-Joachim Melder;
(Kölnischer Stadt-Anzeiger, 3 November 1983)

Bonn 'has no intention of claiming nuclear status'

The Bonn government wants neither a say in the use of nuclear weapons nor a right of veto, says spokesman Jürgen Südhoff.

The Federal Republic's position could not be compared with Britain's. Bonn had signed the non-proliferation treaty and deliberately renounced any claim to a say in their use.

There were longstanding agreements between Washington and Whitehall on the subject, and Nato allies had troops based in Germany.

Bonn had no intention of indirectly laying claim to nuclear status, either via a right to a say or a right of veto.

Veto was inaccurate as a description of what was meant, which in effect amounted to not much more than consultations as arranged.

In the framework of consultations the Bonn government's views carried great weight, and that was quite adequate.

Other Nato partners were also involved in the consultation process.

All Nato countries enjoyed the same status, he said, but distinctions must be made where rights and duties were concerned.

There were some countries where foreign troops were stationed and others where they weren't. The entire issue was complex and unsuitable for public debate.

On more than one occasion in recent months the CSU leader, Franz Josef Strauss, and various Social Democrats have suggested Bonn ought to lay claim to a say in the use of nuclear weapons by Nato.

Social Democratic Bonn MP Karsten Voigt has repeated the demand, saying Germany didn't want a finger on the nuclear trigger, but would appreciate one on the safety catch.

Heinz-Joachim Melder;
(Kölnischer Stadt-Anzeiger, 3 November 1983)

What the young think about the future

the better in East-West ties and relations between industrialised and developing countries.

In their expectations of the future young and older people differ little, which surprised Common Market pollsters, who were expecting young people to be more optimistic.

Views differed from generation to generation on European integration. Most young people are not hostile toward the idea of a united Europe, but 46 per cent would be indifferent to a breakdown of the European Community.

Most 15- to 24-year-olds in the European Community take a gloomy view of the future, according to a survey published by the European Commission in Brussels.

Entitled Young Europeans, the survey was compiled for International Young People's Year, 1985, and based on a poll of 9,700 youngsters in the 10 EEC countries made in spring 1982.

Well over half (between 60 and 70 per cent) of young people asked were worried that unemployment might increase in the years ahead.

At the time of asking 11 per cent of EEC nationals in the age group questioned were either unemployed or looking for a job.

They also expected crime to increase, likewise terrorism and widespread environmental destruction.

A mere 30 per cent foresaw a turn for

Peace clearly heads the bill for issues that are worth running a risk, both for juveniles (65 per cent) and over-25s (67 per cent).

Fifty-eight per cent of the EEC young have either great or some confidence in people in the United States, whereas 72 per cent have little or no confidence in people in the Soviet Union.

The survey reveals interesting details on relations between young people and their parents.

Sixty-three per cent of Dutch youngsters questioned said they were very good, as against an EEC average of 42 per cent and 48 per cent for Luxembourg.

Germans came bottom of the list. Only 30 per cent said their relations with their parents were very good.

Michael Stabenow

(Bremer Nachrichten, 26 October 1983)

■ TRADE

Germans slow off the mark in Far East, meeting told

STUTTGARTER ZEITUNG

German businessmen have been accused of being slow to take advantage of the commercial possibilities of South-East Asia.

A board member of the Ifo economic research institute, Dr Helmut Laumer, told a conference in Munich that almost all other EEC countries had increased exports to the region faster than Germany between 1976 and 1981.

Germany exported DM4bn worth of industrial goods a year, which made it the biggest EEC supplier. But, said Dr Laumer, it was running the risk of losing this advantage to European competitors.

He was addressing a conference organised by Ifo and attended by 400 delegates comprising businessmen, economists and politicians.

Ifo took the step because of increased interest in South-East Asia's commercial possibilities. There have been various high-level trips to the region, including one by Development Aid Minister Jürgen Warnke to Singapore.

The head of the Federation of German Industry, Professor Rolf Rodenstock, is about to leave on a tour of Singapore, Thailand and the Philippines.

Ifo arranged an interesting blend of speakers: Germans and Asians; and authorities both in the theory and the practice of business.

The first day was dominated by the theorists. The managers took over the second day. And opinions clashed.

The businessmen were annoyed at the academics' trend towards generalising and use of statistics to back up opinions.

They became even more annoyed when speakers such as Dr Laumer accused them of inactivity and lack of involvement in the Far East.

Dr Laumer said half the exports to the region were from Japan and 23 per cent from the US. These figures were both rising.

Only 20 per cent came from the EEC. And this figure was getting less.

He said West Germany's deteriorating position was due to a lack of initiative. It was not because of a lack of competitiveness.

Competitiveness had improved compared with other EEC members over the past few years, Ifo studies had shown.

Neither could the blame be put on lack of export opportunities. The share of high-tech products among German exports, for example, was higher than France's or Italy's or Japan's to South-East Asia.

Business delegates rejected Dr Laumer's accusations. They pointed to the differing commercial significance of the individual countries, their different economic positions, needs and economic policies — especially regarding trade.

Dr Wilfried Lütkenhorst of the Ruhr University in Bochum said that protective tariffs and non-tariff trade obstacles and export subsidies played a major role in the South-East Asian countries. But none of this discriminated against the EEC countries. Since these measures applied equally to all exporters they

were no excuse for the EEC's relatively weak position there.

The managers were also upset at being accused of inadequate representation in South-East Asia. They said that this certainly did not apply to major corporations, though it might to medium-sized ones.

Representatives of smaller companies conceded that their representation was not high, but blamed this on tight finances.

The managers also said that the statistics presented by the academics did not reflect reality.

They said US competition on the South-East Asian market was not as formidable as statistics seemed to indicate.

Much of America's exports, they said, were farm products and aircraft — an area in which German industry does not compete.

A compromise formula was found despite these differences. The businessmen conceded the theoreticians' interest in coming up with generally applicable statements. And the academics conceded that their point of view might out of touch with reality.

The two camps agreed on the smallest common denominator: totally different views but a common aim.

It did not take them long to agree that South-East Asia was one of the world's fastest growing markets, which presented German industry with excellent sales opportunities.

Deployment of missiles in Western Europe next month would not damage trade between the East Bloc and the West, says a German trade organisation.

BGA, the wholesale and foreign trade federation, polled its members before issuing a statement.

The president, Hans Hartwig, said East Bloc countries made a clear distinction between foreign affairs and trade relations.

However, trade with some of the smaller East Bloc nations might be hampered because of their high foreign debts.

Several member firms said it was absurd to think that Comecon countries would see any link at all between trade and missile deployment.

The Western embargo after the Soviet invasion of Afghanistan had not harmed trade with the USSR.

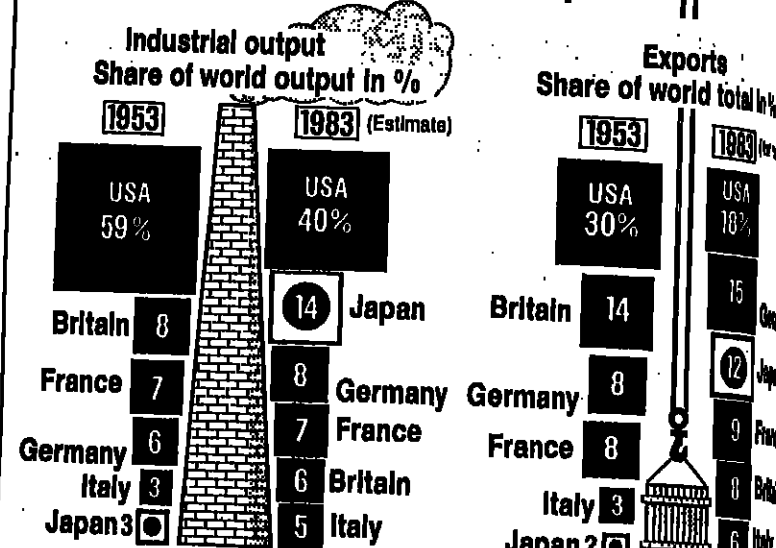
The Soviet Union did not retaliate by buying its grain from non-American sellers until Washington extended its technology embargo beyond its own borders, Hartwig says.

The companies interviewed agreed that the influence of political events on East-West trade must not be overestimated.

The heavy increase in trade in the first half of the 1970s, they said, was primarily due to the East Bloc's opening towards the West and its drive to buy Western technology.

The more sluggish trade that set in around the mid-1970s was primarily due to the Comecon countries' foreign debt. Despite political ups and downs, the East Bloc's share of Germany's overall

The rise of Japan



The director of the Manila-based Centre for Research and Communication, Jesus P. Estanislau, said he expected an average annual growth rate of seven per cent for the region until the year 2000.

Despite agreement on the opportunities offered by the Far East, there was also an awareness of the risks.

The danger was seen as coming from the Asian countries themselves, though particularly from Japan which commercially dominates the region.

Japan's dominant position rests primarily with the general trading corporations that put their emphasis on wholesale and foreign trade. This is reinforced by financing deals and their function as a command post for Japan's major industrial conglomerates.

These general trading firms have branches, subsidiaries and representative offices in all South-East Asian countries.

Their strong market position and their size (Japan's biggest trading firm, the Mitsubishi Corporation, is eight times the size of its German counterpart, Stin-

nes GmbH, in terms of sales) have helped them to ward off export difficulties in the competition. This view was shared by Dr Max Eli, head of the German department of Allianz AG.

He said that this was supported by Japanese firms' mistrust of German cooperation deals.

Because of this dominant position the Japanese trading firms, Dr Eli said, have been putting a strain on the von Kirchbach of the Economics Commission for Asia and the Pacific, Singapore, considers direct investment in Asia is essential. The greater involvement the greater the success, he said.

The conclusion of the meeting was that South-East Asia is far from Japan's front yard, as it is often credited in Europe.

After all, Indonesia is as far from Japan as India is from Europe. A German delegate put it, nobody would seriously call India Europe's front yard.

But this is a fallacy. It is the old problem of the environment. Old coal-fired power stations for example.

Newer versions have an array of filters and other environmental protection devices.

There is yet another factor that should not be overlooked: growth and environmental protection need not exclude each other. What matters is for environmental protection to be organised in a way that does not harm the economy.

The performance of a national economy essentially depends on the age of its production facilities. The newer they are, the more technologically advanced, the higher their productivity.

The rate of investment has improved in the past few months. But this is primarily because of Bonn's investment subsidies for manufacturing and housing.

After dropping markedly in the few years, shipments to Poland have stabilised at about DM1bn.

The BGA doubts that the Comecon countries will be able to sustain their reluctance to import Western plant and equipment and consumer goods. If they did, they would fall even further behind the West.

The Soviet Union is an exception because of its greater export capacity. Materials and energy sales could provide enough foreign exchange to pay for technology imports on a global scale.

German exporters are waiting for other Comecon countries to solve their debt problems.

This is being hampered by their inability to expand their exports due to the EEC's protectionism in agriculture, textiles and steel.

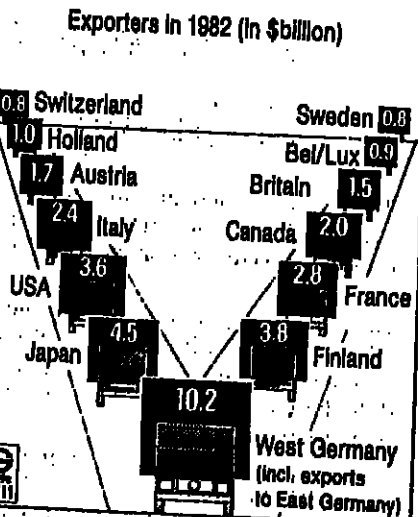
The BGA stresses that the East Bloc's overall debt to the West has risen to DM5.8bn in the past decade.

Hans-Jürgen Mehl

(Die Welt, 24 October 1983)

Missile issue 'no threat to Comecon deals'

Who supplies the East Bloc?



foreign trade has remained fairly constant at about five per cent.

There has, however, been a considerable shift in the trade with Comecon countries, in both imports and exports. More than half of Germany's East Bloc trade is now accounted for by the Soviet Union, as against one-third earlier.

The Soviet Union is also the only East Bloc country to which exports rose in the first half of this year (by 28 per cent to DM5.8bn).

■ INDUSTRY

Plant fit for the scrapheap threatens competitiveness

Still, while the investment trend in 1982 clearly pointed downward, it now at least points in the right direction: up.

Investments are expected to be up 3.5 per cent adjusted for inflation this year and 4.5 per cent in 1984.

But even these growth rates are nothing special, as a Bundesbank analysis shows.

In the first half of this year, business (excluding housing and banks) invested 4.5 per cent more in buildings and equipment than in the same period last year.

Investment in plant and equipment has thus risen slightly more steeply against the previous year than GNP. This is good, but it is not enough.

The Bundesbank says investment in plant and equipment are still inadequate considering the structural changes and need to remain competitive on foreign markets.

Industry's investment in plant and equipment in the first half of 1983 accounted for only 11 per cent of GNP. Deducting depreciation, this drops to a mere 1.5 per cent of GNP.

This 1.5 per cent is the figure by which new investments exceeded wear and tear.

"Apart from a brief phase after the 1973/74 oil shock, this is the lowest investment rate ever in this country," says the Bundesbank.

Investment in the 1970s averaged four per cent of GNP in the 1960s it was as much as six per cent.

"Much more is needed to secure a sustained growth and provide more jobs," it says.

Yet many people doubt that investment creates jobs. The common view is exactly the opposite: that they do away with them. But this is wrong.

High investment phases have always been marked by a growing demand for labour. The fact is that investments secure existing jobs and provide new ones.

It is also a fact that rationalisation is gaining in importance as a driving force behind investment. In polls by the Munich-based Ifo Institute, more than half of the respondents said that their investments this year would be for the introduction of new production methods.

Ifo terms this a post-war record.

But rationalisation need not necessarily mean layoffs. In its last annual report, the Council of Economic Experts said

that "rationalisation investments are necessary to secure our competitiveness on world markets and our future standard of living."

German pay rates, the experts said, could only be maintained if productivity rises, and this presupposes rationalisation investments.

The council says that Germany has had too little too much rationalisation investment in the past five years.

New generation of robots steps up the efficiency

Half of Germany's 1.2 million assembly line jobs are threatened by the new generation of thinking robots, according to a Commerzbank report.

It says that current robot technology eliminates two or three jobs per robot. The second generation will eliminate between four and six jobs and, in some cases, up to 10.

The report quotes Volkswagen figures: robots have been doing between 14 and 25 per cent of production work. This was expected to increase to 40 per cent in the medium term and eventually 60 per cent.

At the BMW works, it was anticipated that 40 per cent of assembly line work would be done by robots by the year 2000.

The Prognos-Makintosh Institute estimates that 200,000 jobs will be lost by 1985 and 500,000 by 1990. The Ifo Institute agrees.

The use of assembly line robots (in jargon, the "rationalisation potential of the future") in Germany has been relatively low compared with Japan and the USA.

Japan's use of robots is primarily aimed at compensation for its labour shortage. In Europe, they are essentially used to replace obsolete assembly line technologies.

The adaptation to new models of the firmly installed robots along the welding assembly lines of the auto industry is difficult and costly. But the new generation equipped with sensors can easily adapt.

Programmable robots can even work on different models along the same assembly line.

The Bundesbank sees it in a similar light. In its 1982 annual report, it stresses that the efficiency of Germany's production facilities has suffered as a result of the two oil crises.

The capital-intensive measures to save energy and develop alternative sources had left little money for productivity improvements.

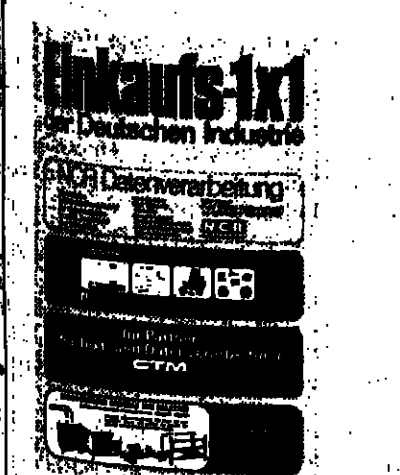
Moreover, competition from threshold countries had led to the shutdown of production capacities in important branches of industry.

Only additional investments could remedy this and the obsolescence of production facilities, says the bank, which favours investment in technological progress.

Paul Bellinghausen

(Rheinischer Merkur/Christ und Welt, 28 October 1983)

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RESEARCH AND DEVELOPMENT

Strong criticism of German efforts in genetic engineering

West Germany is falling behind other countries in genetic engineering and other new biological processes, says a panel commissioned by Bonn Research Minister Heinz Riesenhuber.

Japan and the USA, and even Britain and Switzerland, are much further ahead in the kind of genetic manipulation that leads to the development of new industrial processes.

Biotechnology is expected to result in better medicines, richer harvests, more efficient processing of raw materials, better waste disposal and more natural and safer work processes in the chemical industry. Only microprocessors are having a comparable scientific impact.

This makes it all the worse Germany is not keeping up.

If the panel's findings are correct Bonn's promotion of biotechnology research has been a flop.

Riesenhuber's predecessor Volker Hauff, who was more interested in nuclear and computer technology, commissioned two major research institutes to delve into genetics at an annual cost of more than DM30m.

But, says the panel, the work done by the institutes was pitiful. The institutes are the Institute for Biotechnological Research (GBF), Brunswick, and the Institute for Biotechnology (IBT) of the Nuclear Research Centre in Jülich.

The panel says that the research and development work at the various GBF departments differed widely in quality. Top research teams were found to be "very much in the minority."

Some groups, the panel says, "did quite sound basic research but their work lacked the desired orientation towards long-term practical application."

The findings of several groups were assessed as "rather below average international standards."

Only two branch institutes of IBT impressed the panel. That of a third branch institute was seen as "problematic."

It was probably most welcome to the panel to be able to use Germany's researchers as a scapegoat for the poor take-off into the bio-future.

The point is that the panel members themselves must bear some of the blame for the backwardness of Germany's research.

Four of the nine are board members of German chemical and pharmaceutical corporations — that is, when they don't happen to be writing expert opinions. And it is industry that has missed the genetics boat.

The other five panel members are university professors, and it is the universities that must bear the blame for Germany's research deficit rather than those responsible for government promotion.

Research Ministry figures speak for themselves.

Over the years, Bonn has poured much more money into industrial, university and Max Planck Institute research projects than into the biotechnology institutes.

DM63 m and DM70m respectively will go to private and university research projects this year and next. DM336m was spent on biotechnology projects over the past ten years — much of it money down the drain.

Though industry is always happy to

take money from Bonn, the funds are not put into additional research.

A top executive of a chemical group that ranks among the leaders in genetic technology: "It's a bit unfair of us to take the money from Bonn because what research we can afford we do anyway — the rest we leave alone. The million or two from Bonn has no influence on our research decisions."

Insulin, the first marketable product made from genetically manipulated bacteria, shows how little state subsidies help in international competition if industry itself is not on its toes.

Bonn came up with subsidies for insulin research. Schering AG collected DM2.5m for a project in this field between 1975 and 1978. Hoechst AG received DM2.3m for the same purpose.

But Schering abandoned the project at the end of 1978 because the board saw no chance of weathering the competition on the insulin market, among them Hoechst.

Hoechst's genetically manipulated insulin will reach the market in 1984 at the earliest — two years after the American competitor Eli Lilly which has already begun to capture the German market.

The success recipe of America's biotechnology industry rests on a simple formula: economic ties between top university researchers and financial backers.

Professors and financiers, the latter often acting on behalf of major industrial corporations, join forces in small research companies, translating scientific know-how into new products.

Next to none of this exists in this country. There is no venture capital, no adequate number of top scientists and no unhindered cooperation between universities and industry.

The task of acting as a "go-between" between university institutes and indus-

try has overtaxed the Brunswick and Jülich institutes from the very beginning," says a 1980 Research Ministry report.

The institutes would only have stood a chance of industry had sought and offered cooperation. But it did not, the report says.

As one GBF scientist says: "There are hardly any of the major industrial corporations among our partners. It's mostly small or foreign companies that want to cooperate with us."

A board member of a pharmaceutical company confirms this from his vantage point: "There has been no cooperation between us and GBF. Perhaps we weren't aware of their capabilities. And perhaps they didn't sell themselves well enough."

What bothers the research managers of the major industrial corporations is the government researchers' obsession with having a say.

At GBF — in legal terms a limited company — supervisory and advisory boards proliferated at almost the same rate as the microbes in the laboratories.

Control and advisory functions were exercised by company meetings and the supervisory board, the management board, the scientific-technical council, the scientific advisory panel, the department councils and the works council.

What the Brunswick scientists regarded as freedom of research is seen by Riesenhuber's panel of experts as the source of all evil: "This structure permits neither efficient management nor adequate quality controls."

Riesenhuber has assigned himself the task of streamlining GBF. He is likely to adopt his panel's proposals and thin out the jungle of boards.

Two representatives of industry will join the supervisory board of ten.

The panel's proposed slimming diet

for the Jülich Institute for Biotechnology and its suggestion that a part of GBF are likely to cause some headaches.

To accommodate the Jülich Institute is to discontinue all work on cultures. This, according to the report, would make the envisaged construction of a DM40m new laboratory unusable.

But this slimming cure does not go with Riesenhuber's promise of priority to promoting biotechnology.

If he actually believes that he needs a major biotechnology institute he would have to specialise in dribs and drabs.

There is also the fact that the scientists are reluctant to abandon work on plant cell cultures — regarded as particularly promising for the future.

But there are arguments that against major research in biotechnology. Four other genetic research centres are making, and all of them are hoping on the Research Ministry's aid. Their major advantage is that they act as a direct link between industry and university institutes.

Take Cologne: here, Bayer, the university and the Max Planck Institute for Genetic Research are working hand in hand. Bonn intends to subsidise with DM16m until 1986.

In Heidelberg, university and Max Planck Institute are working closely together and are to receive close to DM19m from Bonn until 1986.

In Munich, a working party consisting of Bayer, Hoechst, the university and Max Planck Institute hopes to receive help from Bonn.

And in Berlin, Schering cooperation with the university and is receiving subsidies from the Senate and hoping more from Bonn.

This makes it obvious that Riesenhuber, the universities and industry are in on the gene race.

The Brunswick researchers will find it hard to prove themselves indispensable.

Wolfgang Gehrmann
(Die Zeit, 14 October 1983)

Group acts as laboratory for industry

The Fraunhofer Society, a scientific research organisation which has 30 units specialising in applied research on contract to industry, has held its annual conference in Berlin.

Society get most of its budget from contractual work commissioned by industry or the public sector.

The society's research work is divided into three sectors: contractual work in 1982 accounted for DM192m in revenues. The service sector made DM11m.

These two areas include civilian research work which accounted for 83 per cent of the society's operating costs.

The third sector is defence related and the operating costs for that year were about DM42m — the same as in the previous year. This means that work in this sector has been cut back somewhat.

The research is concentrated on eight major areas: micro-electronics, sensor technology, data processing and production automation, production technology,

material and component characterisation, procedural technology, energy and construction technology and environmental research. This is supplemented by technical and economic studies and specialised information.

The society's full-time president from 1974 to September 1983 was the physicist and industrialist Dr Heinz Keller.

When he retired because of age he was succeeded by Professor Max Sybke. One can justifiably speak of a "Keller era" in which the society's overall value in value to reach DM300m — work for industry had increased steadily.

Professor Sybke told the had named meeting that the organisation was still fledgling when Keller took over.

He said that the subsidies from the research work in the 1960s had by then ended.

Speaking directly to Dr Keller, he said: "You have given weight and a profile to the society."

Like his predecessor, Professor Sybke is a physicist with an industrial background. His ties with the society go back several years. Together with Professor H.H. Nagel, he headed the Fraunhofer Institute for Information and Data Processing.

In 1975, he was made honorary professor of Karlsruhe University.

(Frankfurter Allgemeine Zeitung für Deutschland, 1 November 1983)

MOTORING

Death on a motorcycle: the man who finds out why

"At last I no longer need to keep up with the rest at breakneck speed."

The repercussions of the accidents, especially the injuries, are also an important subject the probe is intended to cover.

Which injuries were prevented by the helmet, protective clothing, crash bars and saddle bags? Which could have been prevented by them?

The aim of this part of the probe is to help improve accident precautions of this kind, accompanied by biomechanical safety tests in the university laboratories.

An important conclusion already reached is that helmets (worn by over 90 per cent of motorcyclists) are often life-savers and have never done anyone any harm.

Head injuries and brain damage are still the most dangerous and most frequent injuries that happen in motorcycle accidents.

As a general rule the biker's head performs the "concertina zone" function. But the kind of head injuries that occur seems to have changed.

Fractured skulls have grown extremely infrequent, whereas brain damage occurs in serious accidents even when helmets are worn.

Herr Schüller and his colleagues in Heidelberg see this as proof that crash helmets as currently designed and marketed still have ample room for improvement.

The situation, he says with regret, is diametrically opposite to the position with regard to car safety belts.

Belts have been improved in design and quality as a result of heavy investment by the motor industry, but an incomprehensibly low percentage of motorists use them.

Last May the Transport Ministry and the Road Safety Council launched a publicity campaign to persuade more motorists to use seat belts.

If the latest Transport Ministry figures are any guide it would be an understatement to say the campaign had not been very effective yet.

The percentage of motorists who use their belts has on average declined: by one per cent in all and by two per cent on country roads.

Bonn Transport Minister Werner Dollinger a year ago shelved his predecessor's plans to impose fines for not wearing belts.

He continues, for the time being, to bank on the common sense and ability to see reason of men and women at the wheel.

A few weeks ago he said on TV that if motorists did not show greater readiness to belt up the situation would need to be reconsidered.

A Ministry spokesman has now announced that the belt-up campaign is to continue at least into the New Year. Decisions would not be reached until its findings had been submitted.

At present the Ministry had no intention of introducing fines for belt offenders.

The latest statistics, compiled by the Road Research Establishment in Bergisch Gladbach, near Cologne, are as follows:

More accidents but fewer use seat belts

On autobahns 81 per cent of motorists belt up, or the same percentage as last March, which was when the previous survey was made.

On country roads the percentage has declined from 67 to 65, while in town, where belting up is most effective, the figures are discouraging.

Only 45 per cent of motorists belt up in town, which is a mere one per cent more than last spring.

The publicity campaign has cost DM2.5m. The latest figures were eagerly awaited and are a particular disappointment because the percentage has in the past always been highest after the summer season.

In September 1982 the percentage of belt-users in town even peaked at 50, although that was arguably because fines were due to be imposed for not belting up.

Twenty large-scale events have been held all over the country, plus hundreds of smaller shows, as part of the campaign that is now to continue until next spring.

Smaller events have been held and

The Heidelberg research unit strongly advise against cut-price offers.

What matters in a helmet is a good fit and a firm one. Thick latex foam padding is bad in helmets because it tends to loosen the fit.

Light-coloured helmets and reflecting decor help to ensure that bikers can be better seen by other road-users.

If helmets are to be repainted (and that could well be banned), then the paint to be used must be specified, as poor paint can seriously impair the protection given.

Important though helmet and protective clothing may be for a motorcyclist's safety, there is no substitute for expert motorcycle maintenance.

Even by periodically checking the functions, bikers can develop a sense of rapport with their bike and will notice sudden changes or wear and tear.

It is obviously invaluable to be able to recognise low tyre pressure, overloading or bad brakes for what they are.

Keeping physically fit is essential, Herr Schüller says. Motorcycling calls for a constant interplay between man and machine.

That, he feels, is why alcohol and drugs (including pills) are much more dangerous for motorcyclists than for motorists.

"Alcohol in particular sweeps away inhibitions, leading to situations on a bike that the biker would not be able to handle even if he were sober."

Alcohol also leads to impairment of the sense of balance, and equilibrium is essential for two-wheelers and people who ride them.

Herr Schüller would like to see all applicants for a Class I driving licence (for motorcycles) given a medical to check their sense of balance.

"If you have trouble in that department," he says, "you're bound to be in line for an accident."

Does he still find biking fun when so many risks are so readily apparent? "Most risks can be avoided, and then it's great fun on a bike," he says.

Julia Diebold
(Stuttgarter Nachrichten, 29 October 1983)

brochures have been distributed in 2,500 companies large and small. Industrial accident insurance corporations have run radio advertising campaigns.

The police too have laid special emphasis on belting up when carrying out traffic checks.

The new figures must be seen against the background of a larger number of traffic accidents. According to the Federal Statistics Office, Wiesbaden, accidents are on the increase.

In the first eight months of this year the number of accidents in which people were killed or maimed on the roads was up 6.8 per cent on the same period last year.

The number of people injured was seven per cent higher, the number of road deaths 3.5 per cent up.

A Transport Ministry spokesman admits that the figure for country roads in particular seem not to make sense, but the number who belt up in town are even more alarming.

Eighty-four per cent of all road accidents in the Federal Republic of Germany that have involved deaths or injuries in recent years have occurred at speeds of less than 60 km/h, or about 38 mph.

According to Road Safety Council estimates 170 road injuries and five road deaths a day could be avoided if most motorists and passengers were to belt up.

Hans-Uwe Haertel
(Kölnischer Stadt-Anzeiger, 27 October 1983)

A master makes anti-racist point at Hof festival

White Dog, old master Samuel Fuller's manifesto against racism, tells the tale of a white dog that is taught to kill blacks.

A black scientist tries to deprogramme the dog and make it forget its training to hate blacks. But it ends up attacking whites instead.

Fuller's film was the outstanding one at the 17th international film festival in Hof, Bavaria.

The director starred in person, 71 years old and a big man, although small in physique, invariably dressed in a light-coloured trench coat with the collar turned up. He looked like someone straight out of a gangster movie.

A number of film classics shown at the festival included his Western, *40 Guns*, made in 1957, a black-and-white sight for sore eyes starring Barbara Stanwyck as the only "man" among men who were still men.

What would Hof be without Hollywood? Festival organiser Heinz Badewitz certainly has a sixth sense for films to keep his public happy.

Something for all

This year they included *The Howling*, a horror film by John Sayles featuring a dinosaur-sized alligator and a werewolf, Marilyn Monroe in *Bus Stop* and Richard Gere in *Breathless*.

So there was something to suit all tastes. A thin patch in new German films was tided over. Filmgoers were elated again.

The retrospective devoted to the work of US director and screenplay writer John Sayles, 33, showed that Hollywood relies on the same ingredients as anyone else. But how much more effectively even when they are sparingly used!

His *Liana* was the most impressive of the many dropout films at the festival. It tells the tale of a woman who leaves her husband and children for another woman and in the end is deserted herself.

Hans Noever's latest film, *Julius geht nach Amerika* (Julius Goes To America), is fine. Let me not be misunderstood on that point. It is engagingly unambitious.

But the point of the film, which is that Julius, a forklift truck-driver, in fact merely moves from one part of Munich to another, could have done with a little more varied and wittier treatment.

Peter Fleischmann's *Frevel* (Outrage), the tale of a plain-clothes police officer and dropout, keeps viewers breathless in comparison, albeit unwittingly.

It starts like a hapless TV crime serial in which the casting is all wrong and grows steadily more mysterious and tension-laden in the puzzling tale it tells.

It is all about a mother who kills her child, a truly quiet and secretive woman, and ends with a dramatic logical bombshell that in retrospect lacks both motivation and credibility.

Roland Klick's *White Star*, starring Dennis Hopper, is a total failure. Hopper is cast as a record promoter determined by hook or by crook to manage a pale blond youth to superstar status.

DIE WELT

Hof has traditionally, unconventionally, been a testbed for the new German film, and this year German filmmakers were out in force to make a good impression.

Herbert Achternbusch fortunately takes himself more seriously than God (whom he portrayed somewhat controversially in his last film).

This time he notched up a personal success with an autobiographical tale about his parents and his birth entitled *Die Olympia-Siegerin* (The Olympic Victor).

Werner Schroeter took the pompous 1982 Manila film festival as an opportunity to make a documentary about the Philippines.

His *Der lachende Stern* (The Laughing Star) leaves nothing to be desired by way of polemical pointedness, while at the same time he doesn't just give Mrs Imelda Marcos, the President's wife, the sledgehammer treatment.

Lothar Lambert may be accused of dealing carelessly and irresponsibly with topics such as women's lib and homosexuality.

But he must be admitted to have dealt with them in *Paso Doble* with refreshing ease, entertainingly and with anything but a heavy hand.

It tells the tale of a Berlin couple. The wife, played by Ulrike S., has an affair with a Persian masseur. The husband, Albert Heins, falls for a dumb Spanish boy who works as a toilet attendant.

Their children can't make head or tail of what is going on. Neither can the audience, after an entertaining film, of the doubtless ironic but sadly clumsily hetero happy end.

Reinhard Münster is a talented youngster with a knack for humour too. His *Dorado One-Way*, with which he graduated at the Berlin Film and TV Academy, deals with a filmmaker com-

Europarliament plan to hit back at US dominance

An all-European film festival is envisaged by the European Parliament in Strasbourg as a means of hitting back at competition from US films.

European filmmakers have been in commercial straits for 25 years. A festival for European films only might help, MEPs feel, and Munich has been suggested as a venue.

But cash and awards will not be enough to seriously challenge the commanding position held by US filmmakers and distributors.

A more effective method could well be make 100 prints of award-winning films and supply them free of charge to a supranational network of European distributors.

Euro-MPs have instructed the EEC Commission in Brussels to consider whether US distributors' trading practices are in keeping with Common Market regulations on freedom of competition.

muting between Berlin and Cannes. Its witty dialogues made it Lubitsch Prize material, and a fine first film. His young colleagues Uwe Schrader, with *Kanakorbraut*, Daniel Helfer, with *Fehlstart*, and Volker Maria Arend, with *Hure*, likewise show talent and amazing self-assurance in handling a cast. So although the German film may be going through a thin patch at present, there need be no worries for the future.

Bernd Plogemann White dog, black man... from Samuel Fuller's film *White Dog* (Die Welt, 31 October 1983)

Imagination essential to survive technocratic era

A crisis of imagination confronts the film and TV drama industry in the Federal Republic of Germany, TV critics were told at their 16th Mainz conference.

This sense of creative imagination was essential if film and TV were to survive in a technocratic era.

Over 300 participants agreed on a strategy of joining forces on film to counteract the threat of forfeiting both identity and audience ratings.

Film director Alexander Kluge outlined approaches to cooperation between the private film trade and the financially secure broadcasting corporations.

His personal commitment and stimulating ideas were instrumental in ensuring that the conference was marked by

more than mere waiting and gnashing of teeth.

The subject of this year's conference was Film Culture — Film Cinema (On the State of Relations Between Film and TV), and it prompted some ideas in the direction of creativity.

Cable and satellite TV and video are sure to bring about changes in the media of which US production corner the lion's share.

Five US media giants, the conference was told, were interested in nothing but profits and unconcerned about the "being" of German viewers.

The German film industry and networks certainly face a problem maintaining their national identity. It will need to produce a wide range of committed film entertainment.

The former director-general of the rischer Rundfunk, Hans Abich, said power of the intellect ought not to be still in the face of the omnipotence of the facts.

"We need vitality and joie de vivre, we are to change reality," he said. The reality to which he referred can be reached by quoting snippets from the Mainz conference.

Speakers referred to the "glorious mediocrity of German films," to "shoe boxes of cinema centres whose screens are so small they seem to be reverting to TV proportions" and to the "immobility of older people who no longer go out to the cinema."

The stick-in-the-mud structure of ARD and ZDF, Germany's two main TV networks, were the other side of the coin. They "accustom the public to the rieties of programme, duplicate themselves and fill in the slot by claiming on the basis of viewer ratings, they are what viewers want."

They were criticised for paying the Hollywood DM120m for new detective serials while spending only a pittance on domestic film promotion.

So the critics, meeting at the DFB

Continued on page 13

EDUCATION

The simple, basic essential: garbage in, garbage out

Computer rooms have become popular that sometimes the power is turned off to get everybody to use them.

Many pupils are as familiar with computer languages like basic, pascal, fortran as other are with multiplication tables. The elite have their own computer.

Despite the advances, progress is not enough, say pupils. Lower Saxony Education Minister Georg-Berndt Hatz is determined to open up state schools to the new technology, but he has been accused of lagging behind developments.

Senior students say the Americans and the Japanese are far ahead. Immediately after taking, office a year Oschatz said it was time for the schools to accept the technological challenge.

Up to now, the schools have gone to the industry hat in hand. Computer manufacturers have been pretty generous, knowing that every give-away computer could result in a home computer buyer.

Another problem worries the teachers even more. Only few of those who attended the Loccum meeting were training computer experts. Most teachers are self-taught. Some have attended special courses.

But the courses are overrun and three-year waiting lists are no rarity. Delegates at Loccum disagreed on whether to have a 'separate computer science subject at school or whether this should be part of mathematics, physics or chemistry.

Data processing ranks as third or fourth elective exam subject for *Gymnasium*.

In the middle grades of *Gymnasium* and *Realschule*, computer science is offered only on an extra-curricular or workshop basis.

One teacher puts a problem to a group of students: "What you see here is the crossroads of a main and a secondary street. You're all familiar with it: the main street traffic light is green."

"It doesn't change until a secondary street vehicle triggers a contact point. Make a computer programme that will explain the change of the main street traffic light 'green-yellow-red' to 'red-yellow-green' on the secondary street."

The problem is easy for senior students from five Hanover *Gymnasium* schools attending a computer-course at Helene Lange School in Linden.

The 15 students — only one a girl — take only a couple of minutes to come up with the programme. The terminal shows a complicated diagram based on the laws of algorithmic logic that govern even the most complicated of computer programmes.

Oversimplified, the computer must be fed information to which it can only answer with a "yes" or "no." For instance: "Is a car passing the contact trigger?"

"Yes."

"Does it have the green light?"

"No."

"This forces the students to be systematic and logical in their thinking," says teacher Rolf-Wolfgang Meuter, a trained physicist and a realist when it comes to teaching.

While other teachers at the Loccum meeting were overjoyed at the 'rush' of students to attend computer instruction, Meuter favours the use of computers as a mere teaching aid.

"Students are in danger of getting out of touch with reality because there is next to nothing a computer cannot do," he says. "But it cannot replace practical experience in physics instruction. It can develop models of society where singles procreate and couples never have any children. It's easy for the computer. But it can only do what we tell it to do. And this is what the youngsters have to understand."

Computer experts shrug this off with a single word: "GIGO" — garbage in, garbage out.

Students who attend computer courses are different from the rest. "No future" slogans are not for them. What they think of is their future work.

"I'm attending the computer lessons because I want to become a tax lawyer," says Jensi. "I won't be able to manage

No figures were available on the *Realschule* (not so elite) secondary schools but it is estimated that at least 25 provide computer instruction.

Up to 60 per cent of senior students receive data processing instruction. But only one per cent agree to being examined.

A data processing teacher: "We have captured the school's elite, but we want to get all of them."

Hardware (the computers themselves) prices have dropped considerably in the past few years, but it is still expensive. Teachers ask where the money is to come from.

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Children at play. Pulling out the plug is the only way to make them go home. (Photo: dpa)

without a computer. But I also don't want to have to buy my software; I want to make my own."

Few people realise how far the new generation has progressed in the field of computers.

They are bored with the computer games offered in department stores unless they can develop and programme them themselves.

They have no trouble learning the computer language. Logo, for instance, was developed by Professor Seymour Papert of Boston for three-year-olds.

Basic already lacks challenge at schools, and students are now going for pascal and fortran.

Yet only eight years ago fortran was regarded as too difficult for university students specialising in statistics.

One Helene Lange School student said: "It's like with swimming. If you learn it as a five-year-old you won't have any problem. But if you're 25 when you're plunged into cold water you get frightened."

One of the Loccum groups dealt with the question whether schools should not protect children from computers, and their social effects rather than expose them to the electronic brains.

Does communicating with machines rather than people not entail the loss of the ability to talk?

A mother put it this way: "What will happen when we take the electronic pacifier away from our children?"

The answer was pragmatic: school cannot go against trends in social development. It cannot become a repair shop.

The best protection it can offer is to teach how to deal with computers. The pros and cons are discussed more earnestly in Germany than abroad.

American, Japanese, Swiss and British schools are much better equipped with computers than German ones.

While Germans timidly ask "should we do it?" the others have been playing with computers for years.

But the Germans are more thorough. Munich psychologist Udo Karl of the Centre for the Use of Computers in School Instruction has compared American and German experiences.

He has come up with one conspicuous difference. When American software is promiscuously come up with a joke or a comic-strip figure at a certain point, everybody laughs. Germans get annoyed.

Karl: "German computer students don't want to play. They want to work."

Reinhard Urschel

(Hannoversche Allgemeine, 26 October 1983)

DIE WELT

ABHÄNGIGE TAGESZEITUNG FÜR DEUTSCHLAND

In Genf spielt Moskau auf Zeitgewinn. USA enttäuscht

Die Sowjetunion auf wackeligen Füßen gegen NATO-Doppelkonvention

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■ HOMO SAPIENS

Ancient skeletons reveal more than just bones to medical detectives

When you watch a detective at work in a TV crime serial you expect him to check his evidence, piece his clues together and arrive at an intriguing conclusion.

The work of palaeopathologists can be just as hard and painstaking, and just as rewarding and exciting.

They are scientific detectives who deal with malignant changes in the bone structure of skeletons.

Palaeopathologists and anthropologists can spend up to 30 hours poring over an old bone to squeeze out of it the last ounce of information about the life and times of the former owner.

They must naturally be able to distinguish between normal bone changes due to development or age and changes due to illness.

In 96 per cent of cases, bone finds can be used to identify the age and sex of the person the bone belonged to.

Archaeology can supply a fascinating insight into cultural, social and religious conditions in days gone by. But we know little or nothing about whether people in those days suffered from rheumatism, sciatica or caries, for instance.

A touring exhibition currently on show at the Westphalian Archaeological Museum in Münster helps to bridge this gap in a manner as interesting for the layman as it is for the medical specialist.

Tales Skeletons Tell is the name of an exhibition that is the first of its kind ever held in the world. Bones, skulls and sections of jawbone are seen to tell a fascinating tale of illness, medical care and surgical techniques in the early Middle Ages.

Archaeologists find graveyards such as those where the bones analysed in this case were buried a mine of information.

They were used for decades or even centuries in south-west Germany, where the Romans were expelled by the Alemanni in the third century AD.

These Germanic tribesfolk lived in the area until the eighth century and buried their dead uncremated, leaving pointers to endless items of information.

Inferences can be drawn as to how tall they were, what shape their heads were, what their average life expectancy was and much more.

Their height varied not only from era to era but also from one social group to another. Members of the nobility were usually taller than freemen or slaves.

Differences in skull shape likewise indicate class distinctions. The upper classes had narrower faces and skulls than the freemen or slaves.

Average life expectancy among the Alemanni was about forty.

Signs of serious back trouble were an indication of social status too. The slaves did hard manual labour: back-breaking work. The nobility didn't.

Ailments of the abdomen may in some cases affect the bones too. In conjunction with doctors, palaeopathologists can identify the illness from which, in this case, the medieval Germanic tribesman must have suffered.

Not even the most insignificant detail can be ignored, as is shown by the case of the skeleton of a 30- to 40-year-old man found in a grave near Taifingen.

During excavations the archaeologists

felt that small dark dots on his thigh bones were specks of soil, which would have been of no importance.

But under a magnifying glass they were found to be dimple-shaped disintegrations of the bone substance and tiny spots where newly-formed bone substance had taken shape.

These spots were subsidiary tumours resulting from a malignant growth. So the man must have suffered terrible pain and have died of consumption after years of agony.

Caries and parodontosis, or tooth and gum decay, were virtually unknown before the production of cane and beet sugar.

But both diseases have spread rapidly in Europe since the Middle Ages. Only 15.7 per cent of the Alemanni suffered from toothache due to caries; nowadays the figure is 54.6 per cent for men and 58.2 per cent for women.

Lung, prostate and breast cancer were as widespread then as now, even though there were no industrial exhaust fumes or cigarettes to help spread them.

Anaemia and vitamin D deficiency, both of which affect the bones, occurred. Even Bekhterev's Disease, which is still incurable, was already in evidence.

It is an inflammation of the joints in the course of which veterbrae and swi-

vel-joints confesce, slowly and extremely painfully.

If the number of head injuries are any guide, the Alemanni must have been a quarrelsome tribe.

To this day an injury in which the skull is split and the brain laid bare is extremely dangerous because of the risk of infection.

It is surprising to see that people in the early Middle Ages seem to have survived such lethal injuries for years.

The legal codes of the period make it clear that such patients must have been given medical treatment, with the culprit being fined in keeping with the amount of medical attention needed.

Skulls split open can be seen to have been operated on to remove slivers of bone. There are even cases in which the patient evidently survived trepanation.

The oldest known instance of trepanation, or boring a hole in the skull, took place in about 10,000 BC in what is now Morocco.

Items on show in Münster likewise indicate that artificial legs and feet existed. There is an indirect reference to this in the legal code of the Alemanni.

If a man cuts off another man's foot he must pay him 40 shillings, the code states, whereas if the victim can still walk around outside the farm and go

Lucy may hold key to the origins of man

For instance, is convinced that the first ancestor of man came down from the trees at least seven to eight million years ago.

He will probably have done so at a later date than Ramapithecus or Sivapithecus, who flourished between eight and 20 million years ago.

In Henke's view, fossil material from Africa tends to disprove the assumption that man's ancestors parted company with the apes as recently as five million years ago.

There are hominid finds up to five million years old, including a fossilised upper arm found in Kanapoi, Eastern Africa.

The most serious problem scientists face in tracing man's ancestry is to bridge the gap between the last appearance of Ramapithecus and Sivapithecus (who were possibly one and the same species) eight million years ago and the emergence of Australopithecus about four to five million years ago.

Nothing has yet been found between the two.

Professor Christian Vogel of Göttingen University anthropology department is similarly unconvinced that man was such a late developer as not to have emerged until a few million years ago, as molecular biologists in particular claim.

Molecular biologists have lately analysed various blood and cell proteins and found them to be virtually identical to those found in similar species but different from their counterparts in more remote species.

round his field using a still he be paid 25 shillings.

Visitors can also see how have been artificially deformed, a custom found in the and later among Mongolians and in the Pamir mountains.

It was brought to Central the Huns in the fifth century the the Alemanni took it as glorious or aesthetic reasons were known.

Visitors to this unusual exhibit for themselves a living world work and suffering as underpore forefathers.

The idea of displaying such public, rather than merely the results in scientific journals ken up by an anthropologist archaeologist.

The anthropologist was Dr Czarnetzki of Tübingen University archaeologist Dr Rotraud Württemberg State Museum, such as with pregnant women.

They worked out the details junction with Dr Christian Ullrich at St Catherine's Hospital, Public interest was tested, it came up with evidence that the that the trio realised they had

The skeletons of our German bears are now on tour. They in Münster until mid-January then he bound for the Rhine Museum in Bonn and the Central seum in Liestal, Switzerland.

Their final destination on the sent tour will be Vienna, which due to reach in 1986.

Remate Schö (Die Zeit, 10 Oct 1983)

They claim in their laboratories have found evidence of a clock. Protein structure changes regularly.

That would mean that different pointer to the length of time which two species have developed since parting company common ancestor.

Molecular biologists Vincent and Allan Wilson of Berkeley, California, have assessed this length of respect of man and the primates basis of protein structural analysis.

They claim the orang utan set its own about 10 million years ago. There are still distinct similarities the protein molecules of blood red blood corpuscles and general stances of man, chimpanzees and las.

So these three are unlikely parted company until four to six years ago, they say. Older finds not be classified as hominids.

Yet Professor Vogel says molecular findings in respect of the known hominids found in East make it seem fairly improbable the ancestors of homo sapiens were late developers.

He suspects that the hominids from the dryopithecine branch time between eight and 12 million years ago.

Professor Ziegelmayer of University department of anthropology and human genetics also feels that for the cultural responsibility held are unlikely to have developed as by as four to five million years ago.

Australopithecus finds up to 10 million years ago date back to the he argues, and they could hardly associated with species of monkeys existence.

So differences must have arisen. Ernst Heller (Hannoversche Allgemeine, 10 October 1983)

MEDICINE

Doubts over safety of magnetic tomography

Clear magnetic resonance imaging, the newest computer tomography technique, was developed so patients would not be exposed to radiation.

The new tomographs provide pictures of cross-sections of the human body. But instead of X-rays, they work with magnetic fields that interact with atomic nuclei of human tissues that emit signals.

A computer converts the signals into section views of the patient's head.

The absence of radiation makes them suitable for cases where radiation can be dangerous, such as with pregnant women.

The two effects are independent of each other. The cooling of the muscles occurred in all tests while the warming up of the veins due to changes in the flow of blood was registered only occasionally.

The blood flow change in the veins — observed primarily when the magnetic field was at a 90 degree angle to the direction of the flow — usually lasted for about a minute. But time spans of up to 20 minutes were observed in some cases.

The temperature drop in the muscles does not reverse itself until about 30 minutes after exposure. In one case it was evident in the calves one hour after exposure, despite prolonged movement.

Three of the test persons had noticeable side effects in the arms even three days after the experiments. Two complained of muscle strain while the third developed a heavy shiver on top of the muscle a few hours after exposure. Ten days later, the symptoms could still be felt.

The authors offered some opinions about the causes of the symptoms (changes in the conductivity of nerves as a result of the magnetic field). But they conceded that they did not know what biological mechanisms led to the temperature changes.

They warned against indiscriminate use of computer tomographs, suggesting that there was a possibility that the established temporary effects of exposure

Continued from page 10

ing in Mainz, were catholic in their aim, hitting out both at private profits and the broadcasting corporations that commission, subsidise or buy work.

At Kluge, Abich and others made a number of suggestions including the following that went beyond the bounds of criticism.

The Bundespost, they said, was investigating in cable TV facilities, creating jobs for a mere 12,000 people, and only temporarily.

A billion deutschmarks would be enough to keep about 70,000 people in the film industry busy for years, the additional effect that the entire industry would benefit as a nation of producers and TV viewers.

The conference's main aim was outlined in this declaration: "Non-profit organisations run on equal terms by television and TV along the lines of the network agreement are a possible of joint bids to gain access to the broadcasting for private enterprises.

White blood cells or lymphocytes have the function of sounding the alarm in this process.

Groups of them are specialised in specific antigens. On coming into contact with one of them, they trigger the mechanisms that produce antibodies.

The antibodies, in their turn, attack the antigen and destroy it.

Among the hundreds of thousands of specialised lymphocytes there are always some that attack the cells of their own body rather than an intruder.

But in a healthy body these renegades are kept in check.

No so with myasthenia gravis patients. The lymphocytes attack the

The computer tomographs marketed today operate at 1.5 tesla when used for examinations of the whole body.

The test persons used by the Kiel researchers were made to undress and adjust to room temperature for 20 minutes.

Once a balance of temperature between the surface of the skin and the environment had been established, they were exposed to the tomograph's magnetic field.

Their temperatures were taken immediately on switching on the magnets, after a five-minute exposure and, finally, on completion of the experiment.

The 17 test persons had 55 temperature measurements taken.

With magnetic fields of more than 0.5 tesla the surface temperature of arm, leg and torso muscles dropped by up to 5 degrees centigrade. The veins near the surface warmed up about 2 degrees.

The two effects are independent of each other. The cooling of the muscles occurred in all tests while the warming up of the veins due to changes in the flow of blood was registered only occasionally.

The blood flow change in the veins — observed primarily when the magnetic field was at a 90 degree angle to the direction of the flow — usually lasted for about a minute. But time spans of up to 20 minutes were observed in some cases.

The temperature drop in the muscles does not reverse itself until about 30 minutes after exposure. In one case it was evident in the calves one hour after exposure, despite prolonged movement.

Scientists have made a breakthrough in the treatment of myasthenia gravis, a disease in which the muscles become debilitated and the patient becomes extremely tired and eventually dies.

Now Max Planck doctors have developed a system of filtration so the blood can be rid of antibodies that attack the patient's own cells.

The filter is a thick bundle of nylon capillaries containing antigens. It has for the first time allowed doctors to interfere in a specific part of the human immune system.

It is in this area that the root lies of diseases such as myasthenia gravis and probably also multiple sclerosis. Neither is curable.

The team which developed the new process is at the Dortmund-based Max Planck Institut für Physiologie.

The immune system specialises in identifying and destroying foreign bodies such as bacteria.

White blood cells or lymphocytes have the function of sounding the alarm in this process.

Groups of them are specialised in specific antigens. On coming into contact with one of them, they trigger the mechanisms that produce antibodies.

The antibodies, in their turn, attack the antigen and destroy it.

Among the hundreds of thousands of specialised lymphocytes there are always some that attack the cells of their own body rather than an intruder.

But in a healthy body these renegades are kept in check.

No so with myasthenia gravis patients. The lymphocytes attack the



Getting into the picture.

(Photo: Philips)

posure, despite prolonged movement. Three of the test persons had noticeable side effects in the arms even three days after the experiments. Two complained of muscle strain while the third developed a heavy shiver on top of the muscle a few hours after exposure. Ten days later, the symptoms could still be felt.

The authors offered some opinions about the causes of the symptoms (changes in the conductivity of nerves as a result of the magnetic field). But they conceded that they did not know what biological mechanisms led to the temperature changes.

They warned against indiscriminate use of computer tomographs, suggesting that there was a possibility that the established temporary effects of exposure

New hope for victims of muscle disease

muscle receptors that receive signals from the nervous system through a substance called acetylcholine.

The destructive work progresses, initially causing excessive tiredness and eventually death.

The first insights into these mechanisms were gained a few years ago by Professor Hartmut Wekerle of the Max Planck Society's clinical research team on multiple sclerosis of Würzburg University's Neurological Clinic.

Professor Alfred Maelicke of the Dortmund Max Planck Institute tested his antibody filter on rabbits and rats.

The 0.3mm diameter capillaries contain a membrane with a thickness of 0.001mm.

The surface of the membrane is treated with acetylcholine receptors obtained from certain types of eels and rays. The most important element here is the membrane, which must permit the antibodies to pass while stopping the lymphocytes.

The antibodies now react against the receptors and are neutralised.

Since the lymphocytes have no contact with their antigens, they do not step up the production of antibodies.

Using this method, the researchers succeeded in completely purifying the blood of sick rabbits.

Professor Maelicke and his team consider their approach still too non-specific.

fic. The reason: the antibodies that attack the muscle receptors, mistaking them for antigens, cause varying degrees of damage.

In some cases the harm is irreparable while in others all that happens is that the transmission of impulses is disrupted for a given period.

The Max Planck researchers now want to isolate the destructive antibodies.

One approach here could be to replace the receptors obtained from fish muscles that line the membrane by human antibodies.

This would result in more selective filtering and reduce the danger of a new production of antibodies.

Although this process has not progressed beyond basic research it could spell a genuine breakthrough in the treatment of auto-immunity disorders.

Treatment so far has consisted of the exchange of blood plasma complete with antibodies. But this entails the danger of new antibodies being formed rapidly or of greater susceptibility to infectious diseases due to the suppression of the entire immune system.

The antibody filter has already provided two concrete results: it enables doctors to isolate the antibodies in the blood and so arrive at a reliable diagnosis. It also makes it possible to transport the highly perishable fish muscle receptors.

This is a great relief for the researchers because of the central importance of these receptors in both animal experiments and filtering.

Norbert Neumann

(Frankfurter Rundschau, 29 October 1983)

The economic cost of white-collar crime is increasing dramatically. It is also getting harder to fight. Because of this, the *Bundeskriminalamt* (BKA), the German criminal investigation department ran a conference in Wiesbaden of German and foreign experts to consider the problem.

THE LAW

Huge cost of white-collar crime 'not just economic'

White collar crime interfered in the free-market economy and raised doubts about the justness of the nation's economic order, the Wiesbaden conference was told.

Siegfried Fröhlich, State Secretary at the Bonn Interior Ministry, said this type of crime created a vortex which sucked in more crime.

Honest businessmen were tempted to deviate to compete with illegal operators.

This meant genuine competition was destroyed, market forces were corrupted. The effect on the economic and social orders was disastrous and chronic.

White-collar crime was a challenge for politicians, the legal profession and the police. It was a difficult challenge because technical and economic changes were faster than government could move.

The criminals had the advantage. Their inventiveness would be admirable, said Herr Fröhlich, if it served a better purpose.

The meeting was a timely one. The Bundestag has just given a second reading to a bill aimed at closing loopholes involving computer crimes, fraud and wage embezzlement and the like.

There have been some spectacular cases of white collar crime recently.

One was the end, after four and a half years, of the Herstatt Bank trial in Col-

ogne in which DM1.2bn was lost after the most serious bank scandal in Germany since the war.

Another is the *Bundeskriminalamt* (BKA) investigation of about 60 British and German labour-leasing firms suspected to having brought thousands of British workers illegally to Germany.

Huge amounts of incriminating material have been found at 250 German construction companies.

Another investigation deals with fraudulent price fixing by major German construction companies in the further development of Rhine, Main, Moselle, Neckar and Saar inland waterways.

In The Hague a jointly operated cartel office that has contracted for 18 projects over the past three years at excessive profit margins, has been discovered. The total worth of the projects is DM100m.

Other cases include tax evasion, subsidies fraud, illegal dealing in commodities futures and industrial espionage.

Classical crimes like bankruptcy fraud have now been augmented by such modern varieties as computer crimes and video piracy.

The damage caused by this sort of crime is staggering. Some experts say that Germany's taxes could be reduced by one-third if there were no tax evasion.

Social security funds, and thus those who are insured, lose billions every year. If there were no illegal work, contribu-

tions could be lowered and benefits raised.

The legislators' problems are illustrated by the debate on a bill to stem fraudulent tendering for public projects.

The second bill against economic crimes makes no provision for this at all.

When preparing it, the cabinet considered the existing penalties — drastic fines by the Federal Cartel Office — to be adequate.

But insiders stress that these fines are already allowed for by the companies concerned and that, fines or no fines, they still make a profit. The deterrent effect is therefore minimal.

Terminological and legal difficulties have so far prevented lawmakers from coming up with a clear definition of this sort of crime.

All the judiciary and police have to go by is Section 74c of the Court Procedures Act which is widely used by both police and prosecutors.

Another thing that prevents a clear definition is the continuous technical and economic development that makes it impossible for government to keep pace.

This has meant delays in establishing specialised police squads staffed by economic experts.

"The police have had so much catching up to do that they are often unable to meet the judiciary's requirements,"

the president of the BKA, Dr. Boge, told the conference. As a result, public prosecutors had to do investigative work.

"This has not exactly led to a better situation between the two," Dr. Boge also stressed the need for cooperation with foreign authorities.

He urged the establishment of a national European Interpol office, in Münster, Westphalia, since changed hands.

Even the fight against "economic crime" that rests with the courts is still meets with difficulties.

Dr Boge listed not only lawyers but also business training officers with business training knowledge of bookkeeping. He drew to the fact that there were no to acquire this knowledge because there was no reward in the form of career prospects.

But the Wiesbaden conference was not entirely dominated by complaints.

It also dealt with positive measures, including major improvements to one-armed bandits.

They include the establishment of special court panels for white collar crimes, specialised prosecutors and police centres for complex type of crime.

Frankfurt police president Heinz Gemmer, formerly a deputy head at the BKA, said: "White collar crimes cannot be fought with public relations programmes."

"The police have had so much catching up to do that they are often unable to meet the judiciary's requirements,"

MODERN LIVING

Stink over salmon gives restaurateur indigestion

Altbiertube), took the critic, a 30-year-old law student and freelance journalist, to court.

The courts have made heavy weather of the proceedings. Düsseldorf county court ruled in summer 1982 that food was a matter of personal taste. If anyone felt a meal was bad, he was entitled to say so.

The restaurateur, who was suing for damages, appealed. The case has now come up before a higher court even though the restaurant no longer exists.

The offending article was headed A Total Washout, and the writer, Armin Diel, left readers of *Tips für Gourmets* magazine in little doubt as to his opinion.

"Just about everything went wrong that could," his article began. He wondered whether the smoked salmon he was served had been brought to Münster by bicycle.

The salmon was fibrous and dry, oversalted, brown and oxidised. The horseradish sauce served with it tasted like sweet industrial sop.

A chance in a million

the state is the only real winner at gambling, says a consumer report.

People in the Federal Republic of Germany spend DM10bn a year on games of chance ranging from Lotto to one-armed bandits.

Four Germans in five regularly lose their luck, according to a survey published by the Stiftung Warentest in Berlin.

Entitled *Spielen gewinnen? Chancenvergleich* (Easy Money? Chances in comparison), it was written by Ralf Lisch, 33, a statistician.

The 176-page mine of information, it is worth DM7.80 if you would like to know what the chances of winning a game are.

Your chances of winning a million in pools are apparently 0.00000072 to 1 whereas you are likelier (0.00014 to 1) to miss a suitcase when travelling by

air, to take another improbable comparison, you are four times likelier to be hit by lightning in the course of the year than to land the treble chance in pools.

If you're a man, your chances of surviving to 100 are 7,000 times greater than of landing the elusive pools treble chance.

Even to stand an even chance of winning the lowest amount possible you must submit at least 37 entries (and are likely even to win what it cost you to get).

Ralf Lisch's tips could be worth a million. They could certainly be worth the price. Here are some of them:

Don't go by your birthday in choosing your Lotto numbers. So many do that you would be sure to share the prize with others.

Choose numbers (six out of 49 is the rule of the game) others would be unlikely to select. He suggests 41 to 46 exclusively.

Pussball-Toto, Rennquintett and 77 it may be worth a wager when the jackpot is full to the brim.

If you fancy a flutter in the lottery, a ticket for all six draws. Only in the long run will you have used your chance to the full.

In roulette you will on average probably lose less than in other games of chance, but the game is soon over. Losses can mount up.

Before entering for a competition of any kind, don't forget that your name and address may be sold to address agencies.

But don't let me spoil your fun," he concludes.

F. R. Karutz
(Die Welt, 26 October 1983)

Centre to give legal advice to children

An organisation has been set up to provide impartial legal advice and assistance to children and young people. It has the backing of DKSB, the German society for the prevention of cruelty to children, and was set up in Bielefeld in September.

The organisation's founding chairman, Hans-Christian Prestien, says it plans to run advice bureaux all over the country.

Children and young people will be given advice and assistance on matters such as separation and divorce and youth court cases.

Herr Prestien, who used to be a family and youth court judge, said in Bonn that advice was currently provided almost entirely for adults.

Children were often mentioned but seldom consulted. They were seldom heard in court either. Lack of impartial advice or a lobby made them helpless.

Young people took part in youth court proceedings in which they were only in exceptions represented or advised by lawyers.

In close coordination with the DKSB legal and other advice is to be provided, plus representation and after-care. Panels will be staffed by a lawyer, a psychologist and a social worker.

Frankfurter Rundschau, 26 October 1983

Worms thrown back in council's face

Ten million worms seem destined to be the subject of litigation between an old-age pensioners' club in the Eifel hills and the city of Cologne.

The corporation borrowed one million worms from the pensioners to help convert garden waste into valuable compost. The experiment was a success.

The worms might well agree, but we will never know. When the pensioners came to collect them they had wriggled off to an unknown destination.

That was when the trouble began. The pensioners sent the corporation reminders, claiming that at the worms' rate of procreation they could well expect to be returned a billion wrigglers, not just the original million.

The corporation returned fire with legal documents referring to a specific amount of topsoil containing an unspecified number of worms.

They seemed to have joined forces, with local worms, the lawyers argued. Who could now tell them apart? So maybe a truckload of compost full of wrigglers would make amends.

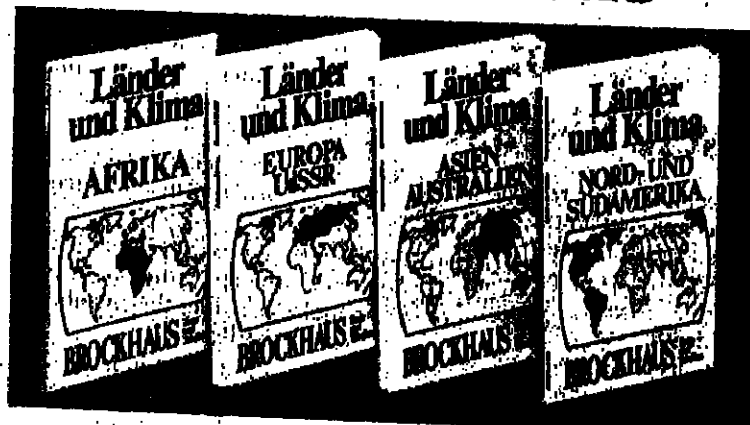
But the pensioners said there weren't enough of them. After checking the compost offered, a spokesman for the pensioners said he had plenty of compost of that grade in his own back garden.

Besides, the pensioners no longer want their worms back. They want cash. Unless the two sides come to terms they will be suing Cologne for DM40,000 in damages.

dpa

(Der Tagesspiegel, 27 October 1983)

Meteorological stations all over the world



supplied the data arranged in see-at-a-glance tables in these new reference works. They include details of air and water temperature, precipitation, humidity, sunshine, physical stress of climate, wind conditions and frequency of thunderstorms.

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